



THOMAS G. NEWMAN, Editor.



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Mr. John Burch, who commenced the spring with 93 colonies of bees, died on April 13, 1887, of spinal fever, at the age of 26 years. His wife keeps the bees now.

The Indiana State Fair will be held at Indianapolis on Sept. 19 to 24, 1887. We acknowledge the receipt of a beautiful lithograph of "Ruth gleaning in the fields of Bonz," issued by the State Agricultural Society, announcing the date of the Fair.

"**The Book of Life**; or the Nature and Destiny of Man," by Dr. Sivartha, 420 pages, profusely illustrated, is on our desk. During August it will be given away to every subscriber to *Health and Home*, a monthly periodical published at \$1 a year.

Todd's Famous Honey-Ice-Cream is what they call it down in Philadelphia. Why not have such a Honey Depot in every city of America? The only reason that can be given is that our honey-men are "sleeping while on duty!" Mr. Todd is one of the wide-awake men of the period. He believes in honey; he sells honey; he uses honey in making ice-cream; he creates a demand for it by advertising it as "Todd's Famous Honey-Ice-Cream." Strong men buy it; delicate ladies sigh for it; the children cry for it; and all say "Oh! my! what a delicious morsel it is!" Would that we had an Arthur Todd in every city of America!

Mr. C. C. Richardson, of Tipton, Ind., who was sued for maintaining an alleged nuisance on his lot, in having an apiary there, died on June 11, 1887. The suit was defended by the Union, and he was allowed to keep his bees in peace since the trial last November—but alas for human ambition and human life, he did not live long enough to enjoy much of the results of their industry. The pursuit was defended, and its enemies defeated in that case just the same. He rests in peace, having gone to the place—"Where the wicked cease from troubling, And the weary are at rest."

The Bee-Keepers' Magazine for July contains the following relative to our editorial on "kissing bees," on page 371:

The AMERICAN BEE JOURNAL, as might be expected, takes us to task for our comment on one of its editorials of recent issue, relating to Mrs. Thomas. We, perhaps, overstepped our bounds in assigning a motive for editor Newman's remarks relative to Mrs. Thomas, and we here beg his pardon if we have misjudged him, and can assure him that no jealousy actuated us in making the remarks. But we reiterate that Mrs. Thomas' statements can be relied upon as the truth; editor Newman to the contrary, notwithstanding. Mr. Newman has done a good work in exposing the "Wiley" lies, but he "overreached" in the case of Mrs. Thomas.

The apology is cheerfully accepted, and as to the statements of the lady in question, we are quite willing to leave it to our readers to decide for themselves as to the "over-reaching." We fully believe the point we made is invulnerable, but it makes no difference as between the AMERICAN BEE JOURNAL and the Bee-Keepers' Magazine—they will work together for the good of the pursuit.

The History of Bees in America is thus stated by Mr. T. P. Johnson, in the *Ohio Poultry Journal*:

When the continent of America was discovered there were no honey-bees here. The country being covered with bloom of all kinds, and no bees to gather the nectar, it was thought that this would be a good country for honey-bees. So a German conceived the idea of importing a colony of bees from Germany. In 1628 he started across the ocean with 2 colonies of bees, but lost both of them on the way.

The next year he started three more colonies, and succeeded in getting two of them across alive. They appeared to do well, and soon began to swarm; and a great many swarms went to the woods and settled in hollow trees.

The 25th Annual Report of the Michigan State Board of Agriculture is on our desk. It contains 318 pages, and makes a good showing for the work accomplished at the Agricultural College. Prof. Cook, in his report, makes this statement:

We have made no experiments in the apiary the past season, except to try the "New Heddon Hive," and the solar wax-extractor, with both of which we are well pleased. We have increased our bees from 12 to 30 colonies, and have sold quite an amount of honey. The season has proven that drouth alone does not surely prevent the secretion of nectar by the flowers. We have now so large an apiary that it is utterly impossible to manage it well with no other than student labor. Several colonies of bees have been sold during the year.

In Reference to the meeting of the convention this fall in Chicago, Prof. Cook writes thus:

I fear I cannot attend a meeting in September or October. I could in November, on the second week of the Fat Stock Show. I think November the best month of all. Work is done then. Does it not strike you so?

Yes: we certainly do think it the best time to hold a convention, for the railroads will all run excursion trains during the second week of the Fat Stock Show. As bee-keepers have but little honey to sell, they will all feel like "saving the pennies," and this will give them a good chance. The work in the apiary can easily be arranged accordingly.

Is the Bee-Sting Used for any other purpose than as a weapon of defense? M. H. Tweed, of Allegheny City, Pa., sends us the following, clipped from the Pittsburgh Chronicle of June 7:

At a meeting of the Physiological Society of Berlin, it was given out as a fact, that, when the bee has filled his cell, and has completed the lid, a drop of formic acid, obtained from the poison-bag connected with the sting, is added to the honey by perforating the lid with the sting. This formic acid preserves honey and every other sugar solution from fermentation. Most of the insects that have a stinging apparatus similar to that of bees, are collectors and storers of honey, so that the sting has a double function—it is a weapon and a pickle.

We are not much acquainted with the Physiological Society of Berlin, but it seems to me they had better be sure their facts are facts before they give them out. The item above will probably have some such a run as did Prof. Wiley's "scientific pleasantry;" but until somebody can give us some positive facts, gleaned from direct observation, we shall refuse to believe that honey needs to be pickled, and that the bees use their stings to pickle it before it will keep without fermentation in the hive.—*Gleanings in Bee-Culture*.

Died, on July 8, 1887, at Napa, Calif., aged 54 years, Mr. Joseph Enas, who was a correspondent of the AMERICAN BEE JOURNAL, and well-known to many of our readers as a progressive and successful apiarist.

Mr. Aspinwall, editor of the Bee-Keepers' Magazine, has had serious afflictions in his family for a few months, which we are sorry to be apprised of. The Magazine for July says:

For three months his wife has been very ill, and as he has personally nursed her by night as well as day, it has unfitted him for the arduous duties of the busy season, and caused delays which we much regret, but which, under the circumstances, were hard to prevent. Absence from home, with his wife during the past month particularly, will cause this number of the Magazine to appear very late. We expect that, through the kind providence of God, she will shortly be well again, and the August number appear on time.

The BEE JOURNAL condoles with Bro. Aspinwall in his affliction, and hopes for the speedy recovery of his wife, and the restoration of punctuality in the Magazine.

John D. Van Gorden, 69 years of age, in Pike County, Pa., was recently killed by a bee-sting on the wrist. A few minutes after he was stung the pain became so intense that he started for the house. As he entered the door he groaned, "Oh, I am going to die," and immediately expired. Of course his system was very much "out of order," and the machinery was in the right condition to stop from the least provocation.

Union Convention at Chicago.—The North American Bee-Keepers' Society and the Northwestern Bee-Keepers' Society will meet in joint convention in Chicago, Ills., on Wednesday, Thursday and Friday, November 16, 17 and 18, 1887. This date will occur during the second week of the Fat Stock Show, when excursion rates will be very low.

QUERIES

With Replies thereto.

It is quite useless to ask for answers to Querries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.

Fall Crop—Feeding Granulated Honey.

Query 447.—In colonies of bees run for extracted honey the combs are filled with sugar or granulated honey. 1. Where a fall crop is generally good, would it be wise to rear queens and build up nuclei into full colonies to gather the fall crop? 2. Will the granulated honey do to winter bees on?—Pineville, N. C.

Yes.—DADANT & SON.

1. Yes, if you can get your colonies sufficiently strong in time. 2. It will do in a moist, warm climate, but not in a cold one.—J. P. H. BROWN.

1. I do not clearly understand your meaning. 2. Granulated honey is not safe to winter bees on in Michigan, but it may be in North Carolina, however.—JAMES HEDDON.

Yes, use up the sugar and granulated honey in getting bees for the fall crop.—G. M. DOOLITTLE.

1. The plan is good, if you can get the colonies strong enough in time. 2. I am afraid the bees will waste much of the granulated honey.—C. C. MILLER.

1. I should suppose so, though one can hardly advise without more knowledge of the surroundings, etc. 2. I should suppose so, in North Carolina. I should prefer liquid honey in the North, where the bees are long confined to the hives.—A. J. COOK.

1. If you want to increase your bees it will be a good way to do it. 2. In my location bees winter all right on granulated honey. But what are you doing with sugar in the combs, when you have a "fall flow" of honey to fill up your hives for winter?—G. W. DEMAREE.

1. Where you have a good fall crop, get all the bees you can to gather it with profit. 2. Bees will winter on granulated honey, but well-capped liquid honey is better.—H. D. CUTTING.

1. If a fall crop is assured it should be prepared for; and if the number of workers can be increased as you suggest, without too great an expense, it may be advisable. 2. I have never used granulated stores for winter, and I do not know how it would answer.—W. Z. HUTCHINSON.

1. I have made my increase on the nucleus plan in the late summer for years, allowing the bees to gather what fall honey they could, and feeding the balance with honey or syrup. 2. In my experience, granulated honey is not safe to winter bees on. The best use to make of it is to utilize

by building up swarms with it in the spring. It is as good as any food for that purpose.—J. E. POND.

1. Yes; if a fall crop of honey is reasonably expected, it will be well to prepare for it by building up nuclei into full colonies. 2. Granulated honey is not suitable food for wintering bees in the North; but it may do in North Carolina, where the rigors of winter are less.—THE EDITOR.

What Ailed the Bees?

Query 448.—I lost 7 out of 10 colonies the past winter. They were packed with 5 inches of shavings on the sides, the ends of the hives being double, made of 7/16 inch boards, with building paper between. The bottoms were double thickness, with shavings between; the top 1 1/4 inches, bee-space, with wire-cloth, 3 inches of dry poplar shavings, and the balance of the top filled with straw, with three 1-inch holes in the top. The entrances were 5-1/2x8 inches, open, and the alighting board leaned up, and a tight board fence 4 feet high was on the east and west. Last year I increased my apiary from 4 colonies to 10, took 600 full one-pound sections of honey, and a multitude of partly-filled ones. Swarms were all out by June 10, and no honey was stored after July 10, caused by the drouth. Why did the bees die?—Grinnell, Iowa.

The data given is not of the proper character to enable one to say *why* the bees died.—W. Z. HUTCHINSON.

I suspect that they died because you did not put them in a cellar.—C. C. MILLER.

Not knowing the exact condition of the colonies, it is pretty hard to say. Probably by too few bees, and not sufficient stores.—J. P. H. BROWN.

If the bees did not starve, it was probably the weakness of the colonies that was the cause of their death. The fault may lie in something that you do not mention, or did not notice.—DADANT & SON.

It is a freak that they have quite often, and (excuse me) no one knows why. I am the most successful in cellar wintering.—G. M. DOOLITTLE.

I suppose that they had the bee-diarrhea, caused by eating pollen in continued confinement.—JAMES HEDDON.

Your method of packing was all right. It looks like a case of old, worn-out bees, that you put into winter quarters.—H. D. CUTTING.

If the bees did not stop breeding so early as to have none but old bees to begin the winter, and were not destroyed by disease, I could give you no clue to the trouble. I am of the opinion that bees only partially protected with packing are worse off than if not protected at all. In your climate 2 feet of shavings would not make the hives frost-proof. I doubt if such packing would exclude all frost in this more moderate climate.—G. W. DEMAREE.

I do not think that ordinary wood-shavings are suitable to pack bees with. As packed, the hives were little better than double-walled hives with air-space between the walls, and such hives do not protect much. Cold killed the bees, and the heat of the clusters mostly going out of the top of the hives. I am against free upward ventilation in out-door wintering. A

thin, unpainted "under-cover," with chaff packing above it, allows moisture to pass off freely, but effectually retains the heat.—G. L. TINKER.

Possibly poor food; more probably long confinement with too great variation of temperature. It is just such experiences that make me the hearty advocate of the cellar, where we can surely control the temperature. Give the bees good food and a uniform temperature from 40° to 45° Fahr., and they will winter safely every time. At least I think so.—A. J. COOK.

I do not know from the data given. You say nothing about the amount or position of the stores, or the quality. I have kept my bees on the summer stands in winter, in practically the same way as regards packing, and I have not lost a colony for over 16 years; except two that starved in March, 1885, when I was too ill to attend to them.—J. E. POND.

Probably it was a case of starvation or too long confinement, or both, perhaps.—THE EDITOR.

Simplicity Hives for Wintering.

Query 449.—Can bees be wintered in Simplicity hives with as good results as in any other kind of hive?—M. J. B., Pa.

Yes, in the cellar.—G. M. DOOLITTLE.

No, not in the regular single-walled Simplicity hive.—DADANT & SON.

I think so.—A. J. COOK.

Yes, with proper protection.—G. L. TINKER.

Yes, by protecting the hive either by packing or putting it into a cellar.—W. Z. HUTCHINSON.

I should as soon risk them as any other hive in a good cellar.—C. C. MILLER.

I think they can, if all the necessary conditions are observed.—J. P. H. BROWN.

I can see no reason why they cannot, if properly protected. J. E. Pond and others are very successful in wintering their bees in the so-called Simplicity hives.—G. W. DEMAREE.

Properly stored and packed I can see no reason why they will not winter as well as in any hive under like conditions.—H. D. CUTTING.

I have found that they do; but I think with a novice chaff hives would be preferable, as it requires some experience and labor to fix up a Simplicity hive all right.—J. E. POND.

Practically, yes. The style of the hive has very little to do with successful wintering. Experience has proven this, against all theories to the contrary.—JAMES HEDDON.

Why not? If properly protected on the summer stands, or if placed in cellars, after being properly prepared for winter, bees winter well in almost any kind of a hive.—THE EDITOR.

Correspondence.

This mark \odot indicates that the apiarist is located near the center of the State named; δ north of the center; ϑ south; \diamond east; \bowtie west; and this \diamond northeast; \circlearrowleft northwest; \bowtie southeast; and ϑ southwest of the center of the State mentioned.

For the American Bee Journal

"The Bees are Swarming."

EUGENE SECOR.

When the loud, clear notes of the dinner-horn are heard by the farmer while plowing corn, with the day just begun on a fine June morn, To him it is warning. That the bees are swarming. And the interest is equal to a new baby born. Old "Doll" is left standing alone in the row, in the spot where the dinner-horn prompted the "whoa." And off to the house in a sweat he must go; For where bees go a-frolicking, Like bobolink's rollicking, No time must be lost in delay, you know. See them gambolling high in the air! Circling, and crossing, and meeting up there Like the dizzying maze of the dance, when fair Young maidens go whirling, And young men twirling, Vainly seeking a "queen" in the ball-room's glare. With horn, and tin-pan, and old brass-kettle. The children are thundering with all their mettle, The sole aim an object of this racket to settle The frisky young swarm. In the ancient form Of drowning a noise by making more rattle. While Charlie is gone to the woods for thyme, slyly watching the red squirrel nimble climb, Or listening to the mountain brook's sweet rhyme, (Sung none the less sweet For the boy's grimy feet.) The dutiful bees are "charmed" in time. Clustered at last in that old cherry-tree. But naught of the "hiving" or bees do I see, For thoughts of the time come back to me, When I climbed in its branches, And plucked its ripe bunches, Careless, and thoughtless, and happy and free. How old-time memories come trooping to mind! Dearer and sweeter when looking behind, And the thread of our life we seek to unwind. While the playful bees, In their swarming sprees, Bring back the June days that were once so kind. The leafy woods I see once more. The robin and thrush I hear as of yore— I smell the new hay as it falls by the mower; In the cover the woodchuck, By his hole near the big rock— All these come back to me while the bees "roar." Gently put the new swarm in their nice new home, And disturb not the musings that unbidden come Of the loved scenes and places from which we now roam: For thoughts of life's June, When the heart is in tune, Are "sweeter than honey and the honey-comb." Forest City, Iowa.

For the American Bee Journal

Selling Honey in Home Markets.

REV. M. MAHIN, D.D.

It is easy in a good season to produce a large quantity of honey either comb or "sincere." (It is said that "sincere" means, etymologically, "without wax"—from *sine* without, and *cera* wax, and was originally used to signify pure honey; and if the etymology were generally understood it would be just the word we are looking for.) But the problem that confronts the honey-producer is, how to convert the honey into cash.

I am fully persuaded that the best plan is for the producer to create a home market. This can be more

easily done than many imagine. In three places where I have lived, I have created a demand for "sincere" honey where none existed before. At New Castle, Ind., when I began bee-keeping, extracted honey was unknown in that locality. As I did not produce largely at first, I found a demand for all I could produce at from 20 to 30 cents per pound—the latter for extra basswood; and as the production increased, so did the demand. From 1877 to 1880 I was stationed in Logansport. When I went there, there was no market for honey of any kind, and extracted honey was entirely unknown. By putting the latter up in glass jars, and getting some of the grocerymen to handle it for me, I soon built up a trade that took all I could produce—about 1,500 pounds per year. In Huntington, where I spent the next three years, the same things happened. Each package had on it a neat label, with my name, and a guaranty of the purity of the honey. All this was done without interfering with my pastoral duties. I did not then produce any comb honey.

If one has a horse and spring wagon it is an excellent plan to take honey to the homes of the people. Many will buy it at their own doors, of one they know, who would not buy anywhere else. And it will pay to have small packages of both kinds to give to such as are not disposed to buy. Only this must not be done too often. When people get a taste of a really good thing, they will be pretty sure to want more of it, and those to whom a little is given to-day, will be likely to buy next time. Years ago, when I had the help of a son, a young man, I found the plan of carrying honey to the homes of the people a great success.

The greatest foe to the honey market, not excepting even the "Wiley lie," is not over production, but the demoralization of the market by small producers. They have a little honey to sell, and not knowing what the price ought to be, or having so little that it is not worth the trouble of marketing, they sell it for less than it is worth. And of course those who learn of these sales will not give more than the price at which these small, and, perhaps, inferior lots, were sold for.

I am fully persuaded that more honey would be bought and used if the price could be steadily maintained at figures that would give the apiarist a fair living profit, than is bought and used at the present low and irregular prices. When prices are fluctuating, many will not buy at all, unless they are sure that they are paying the lowest market price.

It is very important that the purity of the honey offered for sale, whether in the comb or out of it, shall be above suspicion. Every body ought to know that adulterated comb honey produced by feeding the bees sugar syrup, or some other liquid sweet—the only way in which it can be adulterated—cannot be produced at a profit; and if it could be, it is to the interest of every bee-keeper to offer none but what is absolutely pure.

As to extracted honey: I am not aware that a pound that was not pure has ever been offered for sale by the producer. The adulteration has taken place in the hands of dealers, who were not producers. But everybody does not know this.

A honey-producer should have a reputation for honesty that will place him above suspicion, and be a guaranty that none but pure honey will go out of his hands. If he sells extracted honey, it will help his market to invite the public to witness the process of extracting. Let the people see the combs taken out of the hives, the honey thrown out, and the combs put back again. Witnessing these operations will be more convincing than any amount of testimony and argument. And it would not be a bad plan to invite the editors of the local papers to witness the process of extracting, etc., and to make them presents of enough honey to put them, and their wives and children in an excellent humor.

As to price, the question is not easily settled. First-class comb honey ought to retail at not less than 25 cents per pound, and first-class "sincere" at not less than 15 cents. But what ought to be and what is, are often quite different things. A pound of the best comb honey is worth as much as a pound of the best creamery butter; and the latter cannot be had for less than 28 cents. A pound of good, fresh extracted honey is worth as much as a pound of comb honey. For my own use I would prefer it. But as it can be produced so much more abundantly and cheaply, we can afford to sell it for less.

I think that the use of comb foundation in the sections has had some adverse influence on the honey market, and I have ceased to use more than good starters. When I first began to use it, I filled the sections as full as possible; but I found it difficult to prevent the foundation from warping and making crooked combs. With only starters I get straighter combs, and avoid the hard septum that is generally found when full sheets are used. I do not use separators.

Bluffton, δ Ind.

For the American Bee Journal

Successful Wintering of Bees.

W. J. CULLINAN.

Without any egotism or attempt at self-aggrandizement, I presume I may ask to be placed upon the somewhat limited list of those who have succeeded in wintering their bees without loss.

As some may remember who read my article last fall, I was preparing my bees for out-door wintering, and the first step taken in that direction was to place the bees upon from four to six Langstroth frames, closing them up with a padded division-board. Over the tops of the frames and near the centre were placed three or four little sticks about $\frac{1}{2}$ an inch

in thickness, and over these a piece of burlap sacking and two thicknesses of old cotton quilt, covered with one layer of shingles, a plain honey-board or anything that came to hand, and over all were placed the lids snug and close. This operation was performed in the extracting-room, where the bees were found much more docile, and the hives replaced upon their summer stands.

In going through the colonies the matter of stores was looked after, and it was ascertained that at that date (Nov. 1) each hive contained from 15 to 25 pounds of well-ripened honey, most of which was fall honey, and gathered principally from heart's-ease and Spanish-needle. No effort was made to deprive the bees of pollen, and the combs of the different colonies contained more or less of that baneful article; none were without it, while some had a bountiful supply.

Now, after due and careful deliberation, and a somewhat studious review of the experiences of others in both in and out-door wintering, I concluded to "pick them up, hives, entrances and all, and place them in the cellar," *a la* Heddon. So a bench 12x1½ feet, and raised to 2 feet in height, was placed on one side of the cellar, and on this were placed the hives two tiers deep, with lids left on and entrances open, and facing outward from the wall; but no rims were placed under the hives, only one hive was raised from the bottom-board, and that not until the middle of winter, and then only about $\frac{1}{4}$ of an inch in front. The entrances to the hives were 9x¾ inches.

The cellar is 12x18x7 feet, and in one corner I placed a small heating-stove, the pipe connecting with that of the cook-stove above, the cellar being under the kitchen.

An inside door opens into the cellar from a room in which fire was kept going all winter, and it has double doors opening into it from the outside; these doors were used only in mild weather, while the inside door was used in cold weather.

A thermometer, kept hanging from the ceiling, registered in mild weather from 40° to 50° Fahr.; but in freezing weather, of which we had a pretty liberal share last winter in this region, had no artificial heat been employed, it would have fallen to or below the freezing point. But at such times a slow fire was kept going in the stove, and the temperature of the cellar kept as nearly as practicable at from 42° to 45° Fahr.—frequently running as low as 40°, and as high as 50°. In cold weather the doors were kept closed, and no ventilation was provided, except what these closed doors and the stove afforded. After Feb. 1, the temperature was kept at from 45° to 50°.

On Feb. 28 I took the 16 colonies out of the cellar for examination, and to give them a flight, returning them the next evening. Upon examining a number, I found that the amount of honey consumed was scarcely perceptible, while a brighter, healthier, happier lot of bees would have been hard to find. Not the slightest sign

of diarrhea or disease of any kind was present.

On April 2 I placed them on the summer stands to stay, and they "boomed right along," casting the first swarm on May 20, which was very early for this locality. I was not troubled in the least with "spring dwindle" in my apiary, which was due, I think, to the fact that they were not taken out of the cellar until settled warm weather. I did not feed an ounce of anything to stimulate brood-rearing, and yet on May 1 most of the colonies had eight frames solidly filled with brood.

I believe that bees can be wintered as successfully as horses or cattle, if we but learn the necessary conditions, and then set about it with a will to secure them. A little effort rightly directed will accomplish wonders, "sure enough;" and I know of no line of human industry where persistent and well-directed endeavor will be more lavishly rewarded than in apiculture—and in no branch of this noble science does it apply with stronger emphasis than in providing a comfortable winter home for our little friend—the honey bee; which certainly ranks as the "noblest and the best" of God's insect creation. In my mind, a properly kept cellar is that "comfortable home."

Mt. Sterling, • Ills.

For the American Bee Journal.

Bare-Headed Bees, Foul Brood, etc.

H. E. HILL.

In Mr. Hoyle's article on page 393, in reference to unsealed brood in the pupa state, he says: "I am likely to have no little opposition on this particular point, if I call it a symptom of foul brood; I call it that, nevertheless."

He further asserts that it is a positive indication of the disease. While I am sure I have never seen a case of foul brood, to see nice, oblong, evenly laid patches of brood in the last stages, unsealed, is not a rare occurrence. For this we have adopted the somewhat comical, but appropriate name suggested, I think, by Dr. Miller, viz: "bare-headed bees."

I am inclined to think, although my experience is very limited, that it is more prevalent in the South than farther north. I found it, however, to be the case in Cuba compared with Ontario and this State. My attention was first drawn to the fact while transferring a number of colonies from hollow logs into frame hives, in Cuba, as my assistant used to amuse himself by holding the combs above his head (at a time when robbers were plenty), and watch the unsealed brood drop forward until the surface of the comb was a complete mass of heads, prevented from falling out by the "wire edge" against which the thorax rested.

It is a strange fact that after these bees were transferred, the colonies that contained the "bare-headed" brood were without exception remark-

able for their vigorous working-qualities. While I do not doubt that Mr. Hoyle "never knew a bee to hatch from such a cell, that was of any value," I am quite sure that he "never knew" they were *not* of any value, either.

In Mr. A. J. King's essay read at Indianapolis, last October, on this subject, he says: "Foul brood is not 'indigenous' in Cuba, there not being a case on record in all the native aparies." On making numerous inquiries in nearly all parts of the island I found this to be the case, as not one had lost bees, or heard of bees being lost by such a disease; and as this is in a land where aparies of from a dozen to 500, or even 1,500 colonies, are thickly scattered over the country, we may safely rely upon Mr. King's statements, as not being without foundation. For, with bees kept at nearly every house in the country; hollow logs through the fields and along the highways containing bees, and the countless numbers as they exist in the mountains, in the side of a bank, beneath the trunk of an uprooted tree, or the shelter of a projecting rock—one would suppose that if "foul brood" was to gain foothold in Cuba, every bee-keeper from Cape Maysi to San Antonio would know something of it.

Again, if "foul brood" is unknown there, and it has no connection with "bare-headed" brood, how came the germ of the disease in the Cuban honey which Mr. Pond says was the cause of his loss?

After quoting the following from Mr. Hoyle's letter: "I have known for nearly two years that old bees, as well as the larvae, would be diseased." Mr. Pond says: "Now my experience is just the reverse of this. In my own apiary I have known a diseased larva to emerge from its cell, or a mature bee to show any sign whatever of that disease; and from the very name given the disease cannot affect mature bees. If it does, it is of course wrongly named." Further on he says, with reference to Mr. Hoyle's statements: "And while perhaps he may be correct, and all the others, including Mr. Frank Cheshire (who certainly has given the subject more attention scientifically than any other to my knowledge), wholly wrong, I still cannot believe him right without some little proof."

The facts and truth, and "proof" of the same are just what we do want; but it seems to me that while Mr. Pond is preaching "Cheshire," he is further from that gentleman's ideas than is Mr. Hoyle, unless Mr. Cheshire has advanced some of his ideas privately, or otherwise, that I have not seen, which is quite possible. However, the following, which I quote, is from Mr. Cheshire's pen, having reference to an examination to which a queen, taken from an infected hive, was subjected a short time after his article was read before the British Bee-Keepers' Association in July, 1884. He says:

"All will, I hope, forgive my esteeming myself fortunate in having thus been able to make out the only

points I had to leave undetermined on the 25th of last July. Then I had found the disease in young larvae and those fully fed, in chrysalids in all stages, in drones, in workers just gnawing out of the cell, in young nurses and old, worn-out bees, and now in a queen and eggs unlaid. *Bacillus alvei* is then a disease affecting all and every condition of bee-hood. Can it continue to be called foul brood? To say the queen is suffering from foul brood would be as illogical and ridiculous as talking of toothache in the liver, or rheumatism in a wooden leg." Does he not? Titusville, Pa.

Prairie Farmer.

The Use of Division-Boards.

MRS. L. HARRISON.

I have never been able to procure division-boards exactly to my liking; I have a few made after the directions given by Mr. Langstroth in his treatise on the "Hive and Honey-bee," with the ends beveled parallel with each other, for easy adjustment; but they did not prove so in my hands. When the bees had glued them to the hive with propolis, it was very difficult to get them out. I now prefer to cut them square on the ends, and a full quarter of an inch short, so as to allow tacking on two or three thicknesses of woolen cloth, "lists" or felt, so that when they are set in their place in the hive, they will slip in or out easily, and yet be nearly air-tight.

The division-board is an important factor in the apiary, especially in the spring. If you have weak colonies, with only bees enough to cover a couple of combs, adjust the division-boards so as to leave a couple of frames in the centre of the hive; take out the remainder of the frames and brush off the bees into the hive; spread a canvas sheet over the top of the frames, and put a chaff cushion or a sack of hay in the top hive or cap, thus confining the bees to a small space, retaining the animal heat, and enabling the queen and her subjects to rear brood and build up the colony.

By the use of the division-boards keep all colonies strong as far as they go in the spring, and a colony that can keep two combs full of brood and covered with bees is a perfect colony, to all intents and purposes. Such a colony will store as much honey, according to their numbers, as a larger one, and will send double the number of bees into the field that they would if scattered over five or six combs. This economizing all the animal heat is not mere "moonshine," but can be proved any day, at any time in May or June.

Take one of these small colonies at night, remove the division-board, and leave the two frames of brood and bees in the centre of the hive, and the next day nearly all the bees will remain at home, in order to keep up the necessary temperature. Place them back at night as before, adjust the division-board, and the following

day they are ready to go to work again. When these two combs become crowded with bees, put in an empty comb or frame to fill between them. As soon as these combs are full of brood and crowded with bees, remove the division-board and insert another comb in the centre; keep on in like manner until the hive is full.

Division-boards are indispensable in swarming time, both for the rearing of queens and also for the hiving of swarms. After a natural swarm has been hived for a couple of days, I open its hive and find that comb has been started in four or five frames; these I move to one side of the hive, and a division-board is placed next. This throws the whole strength of the colony on these frames, and they will generally fill them with nice, straight worker-comb.

I ascertained by experiment, several years since, that when bees are confined to a small space, they invariably build worker-comb. If the flow of honey is abundant, and the bees have a large space, in the rush to occupy it they will sometimes build one-third drone-comb, as they can build this faster, and it holds more honey to a cell. In the spring following, the queen will lay in these drone-cells, and an army of "tramps" will be produced, which add nothing to the wealth of the community, are supported by the workers, and all that they are good for is to fill space.

Peoria, Ills.

For the American Bee Journal.

Wavy and Crooked Combs.

W. Z. HUTCHINSON.

Before replying to the arguments of Mr. Stiles, on page 409, I wish to thank him for the courtesy and fairness exhibited in his criticisms. Such reviews are more than welcome.

I have not a particle of doubt that Mr. Stiles has wavy and crooked combs when he attempts to dispense with full sheets of foundation in the brood-nest when hiving swarms; and in return I trust that he will believe me when I say that I have no trouble whatever from this source. Why he does, and I do not, I am unable to say; but there certainly must be a reason. Mr. Heddon, on page 407, says that starters 2 inches wide will sometimes cause a warp or curve at the lower edge of the comb. I have never used them more than $\frac{1}{4}$ of an inch in width, usually about $\frac{1}{2}$ inch.

I have also found that "thin" foundation will not answer for starters. I used quite a lot of very thin foundation for this purpose the present season, and in many instances, usually when the swarm was large, the bees either pulled or gnawed off the foundation, and then crooked combs were the result; but with given foundation of ordinary weight, I have had no trouble from crooked or wavy combs, they being so straight and true that it would require a critical examination to decide whether or not they were natural combs or those

built from foundation. They certainly pleased me, and were I purchasing bees, I would not make a penny's difference in the price between a colony with such combs or those having combs made from foundation. If I could not secure perfect combs by the methods I follow, I should most assuredly practice some other system.

As Mr. Stiles is the only one who has reported difficulty in the securing of perfect combs, it seems as though there must be something exceptional in either his fixtures, methods, locality, or something. To illustrate: I have never had any trouble from pollen being stored in the sections, and had any one who had in contemplation the adoption of my methods, asked if there were no danger of trouble from this source, I should have confidently asserted there was not. A few weeks ago I received a letter from Mr. Dwight Furness, saying that he had had no trouble from this source until he began hiving swarms with starters only in the frames, and placing over them sections filled with partly drawn foundation, but containing no honey. I immediately hived several swarms in exactly this manner. I did not doubt the truthfulness of my correspondent, but we all like to see these things with our own eyes. Well, I did see the pollen with my own eyes; there was quite a bit of it, and it was in the sections too. It required only a few experiments to satisfy me. My bees had never swarmed until they were at work in the sections, thus the sections that were transferred to the new swarm always contained honey.

It will be readily seen how circumstances alter cases. I had reasoned that no pollen was put into the sections because but little pollen was being gathered at this particular time, and I still think I was correct to a certain extent, but it is now apparent that having honey in the sections when they are transferred to the new hive, is an important feature; and one that circumstances had never allowed me to discover. Were I obliged to use sections of empty drawn comb when hiving swarms, I think I should use one comb, or a part of a comb in the brood-nest; but, fortunately, swarming usually comes when there is honey in the sections, and we are not compelled to use sections containing empty combs when hiving swarms—we can use sections filled with foundation if necessary.

Is it not possible that there is some point necessary to be observed in securing straight combs, that myself and others unconsciously practice, and that Mr. Stiles is neglecting in an equally unconscious manner? I fear there is, and I would gladly help him if I could.

Since my little book was published, I have answered hundreds of eager, questioning letters; and I have done the work cheerfully—yes, gladly—as I often receive more information than I give; and I hope no one will hesitate to write to me for fear that it will cause me trouble.

Rogersville, Mich.

For the American Bee Journal.

Hiving Swarms—My Experience.

WILLIS M. BARNUM.

Things are "middling lively" in my apiary now-a-days. I had an extra large swarm the other morning at exactly 7:30 o'clock. Who can beat that? I am seriously thinking of rearing a strain of "business bees" from this colony.

A bushel basket is about the handiest thing to swarm bees with that I have ever discovered. Just hold the basket under the bees, shake or brush them into it, carry them to the hive and dump them down in front of it—and 'tis done. It is a quick, sure and effectual method—one that will be hereafter adopted in my apiary, at least until I hear of something better.

The other day one of those great, big "bushel basket" swarms came out. I hived them in "regulation style," gave them three or four frames of brood, and went off to work in another part of the apiary. I had not been to work five minutes before I discovered that the same big swarm was coming out again. Well, while they were hovering around in the air, it occurred to me that heat was the probable reason of their not staying in the hive. So, getting a nice, new, cool hive, I placed it right where the other had been; sprinkled the inside of the hive with salt-water, transferred the brood-combs, put on the super, put a shade-board on the hive, and waited for them to settle.

Just as I thought they were going to settle on a grape-vine trellis, they soared up into the air and started direct for the woods. As they started for the woods, I started for the pump. I was determined to have that swarm, if I had to chase them to the Pacific Ocean! Getting a cup and a pail of water, I started after the bees on a run. By running cross-lots, I managed to get ahead of them, just before they reached the woods. By throwing the water into the air in front of them, I actually stopped them, turned them around, and started them back towards the apiary. When I got back, the bees were going into the hive that I had prepared for them, just as fast as they could "scrabble." To-day that is one of the best colonies in the apiary.

Angelica, 9 N. Y., July 18, 1887.

For the American Bee Journal.

My Experience with Foul Brood.

GEO. H. HOYLE.

I know the opinions of the different authorities on the subject of foul brood, and I know what arguments can be, and are going to be brought against my theory of the disease. I have a firm belief in all the experiments on the disease that have been reported to the bee-papers; but I am careful not to get a party's opinion so mixed with his experiments, but that I can consider each separately. It is

my intention, after I state my experiments, to base my arguments solely on the evidence to be found in the AMERICAN BEE JOURNAL, *Gleanings*, and other bee-literature.

I am going to offer no plan of cure adapted to all circumstances; for I do not believe that a treatment is yet found, or ever will be invented, that will suit every case. Therefore, every bee-keeper should learn all he can about the disease, and when it is among his bees, he will know better what to do than anybody can tell him.

I am determined to argue the question honestly and fairly; and if any one sees where he thinks I am wrong, I would be pleased to hear of his experience; and I will not contradict his experiments. In connection with this idea, I want to refer the reader to page 426, the second column and second paragraph. He will see that Mr. J. E. Pond puts me in a very ridiculous position; and it is just as false as it is ridiculous. He thinks that I believe every authority on this disease to be *wholly* wrong. I would rather he called me all the names he could think of, than for him to have stated that: the names could do me no harm, but any who see that article and do not see this, will believe it; and those who believe it can come to but one conclusion about me. However, I have the consoling hope that I will soon convince him that I am right, for he requires so little proof. See the last sentence of the first paragraph and the second column of the article referred to.

Now for something else: On June 16, 1885, I discovered foul brood in one of my hives in the shape of discolored larvae; but I do not think that it was foul brood, though, because the disease always appeared, in my mind, as associated with "sunken caps with pin holes in the tops." I was uneasy, though, about it. The honey-flow from flowers ceased that year about May 25, and as I had finished extracting, I was doing very little to the bees except watching that discolored larvae which I could not understand. On June 21 I opened a hive that had it so badly that about 20 per cent. of the brood was dead with the disease, as near as I should guess. I then began to examine other colonies. I found none free from it, though some cases were not bad. I saw that there was only one thing that could cause this state of affairs, and that was foulbrood; and that I must get some remedy and go to work to cure it.

I had read Mr. Cheshire's experiments and views on the subject the year before; and I was so favorably impressed with them, that I took my BEE JOURNAL for 1884 and re-read the articles on pages 644 and 740, and as you may suppose, with no little interest. When I was through studying the articles, I was just as sure that I could cure the complaint with his remedy as is Mr. Cheshire himself. The medicine I got was called "chemically pure carbolic acid." I had then 65 colonies of bees, and as I wanted to cure them all at once, I fed each colony every day. Every evening, as

soon as there was no danger of robbing, I would commence to feed, raising the cover of each hive and pouring about 4 ounces of feed down between the frames. I kept this up for eight days, and as I could see no improvement, I decided on a more thorough treatment, which was this:

I would extract the honey from the frames and cut out the combs, all but about 2 inches at the top, which had never had any brood in it; I filled these strips of comb with this phenolated syrup; put them in a hive washed with carbolic soap; then I would take the brood from a colony of bees and put the bees in the hive thus prepared. I also had a lot of this phenolated feed in a barrel, arranged so that all the bees could help themselves to it, which they did. I had prepared 26 colonies in the manner above-mentioned before I could see whether I was curing them or not. But as soon as they had larvae three or four days old I could see that I had not cured them. I stopped work to watch the result of what I had done: I soon became satisfied that phenol would not cure it.

Now do not put me down as saying that Mr. Cheshire did not cure this disease, for I know he did cure it; and I will explain why he could cure it and I could not, after I get through telling my experience.

I gave up the phenol cure on July 15; and I was just as confident on that day that I could cure my bees as I was the day I commenced it.

I had a boiler made large enough to boil my hives in; I sent for Mr. D. A. Jones' book on the subject; put some colonies in starvation quarters, and went to work cutting out combs, and boiling frames and hives. About this time the hives emitted a strong stench that surpassed anything I ever saw reported. About this time, too, I was taken with a peculiar complaint of the throat, which I attributed at the time to the disease, but since then I thought it might have been produced by the mental anxiety I was in. I boiled every thing; and when I starved a colony I put them in a clean hive, with clean frames with foundation, and fed them boiled honey. I worked 30 in this way. I did not wait until time for sunken caps to appear; for I was a firm believer in the "germ theory," and the least indication of disease in the larvae satisfied me that I did not cure it. I did not cure one; but I am ashamed to say 2 colonies starved to death, and 2 very strong colonies smothered. Please do not understand me to say that Mr. Jones never cured this disease; I know he has cured it. And I will explain why he could cure it and I could not, after I get through with my own experience.

I began to wonder why the disease did not get any worse in some colonies that I had not worked on. I doctored the worst ones, it is true; but they had it as long as the others, and I could not see why it did not get worse. (I will in the future give my opinion, which is founded on observation, why some colonies have the disease worse than others.) Just about this time I saw the following in

Gleanings, from Dr. O. M. Blanton, of Greenville, Miss.:

"Last year, about June 1, one of my neighbors, Mr. S. C. Vaught, discovered dead brood in his apiary. It first commenced with the capped brood but soon extended to the larvae, which, in some instances in both soon became decomposed. On examination I found some of the capped brood with minute holes in the cappings, and the decomposition complete. Some of the pupae just dead I found reversed within their cells. There was a very disagreeable odor from the decayed brood, but not such as described in articles on foul brood. Upon inquiry, I found ten apiaries within a radius of 15 miles of me, affected by it; some to the extent of 15 per cent., and most of it confined to the capped brood. Two colonies in my home apiary were affected slightly. The "Refuge Apiary," with its bright new combs had it in every colony, but it did not reach putrefaction before the bees removed the dead, and filled the cells with honey, and the queen commenced laying as vigorously as ever. Mr. Vaught's apiary of about 250 colonies was so diseased that he determined to let them work out their own salvation, which they did. I uncapped the dead pupae of some colonies, and the bees soon cleaned the cells.

"Just before the discovery of this condition of things, the bees gathered a great deal of dark, sour honey-dew (aphides), and I attributed the disease to that cause. This year, as far as I can learn, there is no evidence of the disease. It certainly cannot be the forerunner of foul brood, or we should have it this year."

Nearly sick with worry, and almost despairing of ever curing my bees, I need not say that I gladly welcomed the small ray of hope that my bees possibly had the same disease as Dr. Blanton's. Still I could not help feeling pretty much like a broken merchant, as I left my bees and went out into the country to get a rest, which I badly needed, having worked very hard for over two months of the warmest weather we have.

When I came back to Mobile about Sept. 25, my bees were gathering fall honey, the disease had almost entirely disappeared, and even the 3 and 4 story hives (six in number), in which I left a lot of diseased brood from other hives, had developed into populous colonies, and had queens of their own rearing; some of which colonies did as well last year as any I had; but some never did amount to anything until I gave them another queen.

Feeling satisfied that my bees never had foul brood, I went to work putting them in the best condition to winter, almost all of them being reduced to nuclei, from my attempts to cure them. When I had finished that job, I thought I would find the difference between the disease that my bees had, and genuine foul brood. I have looked through my bound BEE JOURNALS, Gleanings, and other bee-papers; I have read Dzierzon's experiments, and also Mr. Cheshire's; I

have read Jones, Muth and Kohnke on the subject, and I have yet to see a symptom laid down for the detection of the disease that I have not witnessed among my bees. Hence the origin of my theory; and though if proven it will show our best authorities to have made a mistake, it will also show that the mistake in each case is pardonable though a very serious one.

Mobile, 9 Ala.

For the American Bee Journal.

The Honey-Plants of Canada.

A. H. WALLBRIDGE, JR.

I purchased some Simpson honey-plant seed, and it has thriven well, but alongside of it has come up a well-known plant called by some the "sow-thistle," the "bull-thistle," etc. These plants look wonderfully alike—are they the same?

Mr. Simpson discovered another honey-plant a few years since; I purchased that also, and it turned out to be our common figwort, abundant here. There are yet several honey-plants in this country which he might discover, one of which is called "boneset," a good honey-plant; and also a plant with blue flowers on the racimes, called "bugloss." All these bloom after basswood ceases, and fill up the time until buckwheat blooms. I also purchased some bokhara clover; it looks very much like our sweet clover. Is it the same? People here laugh at my growing plants common to this country, under the idea that I am getting something new.

All the above are good honey-plants, but they are common wild plants here except sweet clover, which grows well when sown. Figwort entices wasps by the hundreds; it is a good honey-plant, nevertheless.

Boneset and bugloss, which I want Mr. Simpson to discover, are excellent plants for honey, and not bad as weeds.

Belleville, Canada.

[The so-called Simpson honey-plant is the "figwort" (*Scrophularia nodosa*), and is often called carpenter's square because of its square stalk, and rattle-weed because its seeds rattle in the pod. It is an excellent honey-producer.

The "sow-thistle" (*Sonchus asper*) has no seeds worth mentioning, being a hybrid. It propagates by division, and is not the same as figwort, which is the only honey-plant said to be discovered by Mr. Simpson.

Bugloss (*Echium vulgare*), called viper's bugloss or blue-plant, belongs to the "borage family," produces honey, but is considered a troublesome weed in many localities.

Boneset or thorough-wort (*Eupatorium*) yields rich golden nectar. There are 16 species in the Eastern

States and Canada, and is very often mentioned among our best honey-plants.

Bokhara clover is the same as sweet clover (*Melilotus alba*), but designates the imported seed.—ED.]

Home Farm.

Deep or Shallow Frames?

ISAAC HUTCHINS.

One of the reasons given by an advocate of deep frames, is that bees, "when they leave us seek the cavity of a standing tree, long in its up and down position." Another reason is that "as winter approaches they are found clustered in their brood-nest just below their stores, and as the winter season wears on, they gradually move upwards in the line of their supplies, warming their stores for use, and taking their food without breaking their cluster."

All this seems very plausible, and will no doubt cause many bee-keepers of little experience to make a change for a deeper frame, and I fear it will add to their winter losses.

The first proposition does not, to my mind, furnish any proof that a hollow tree is a better hive for bees to winter in, because bees, of a necessity, occupy it.

In the absence of statistics we are unable to show how great their loss is. Bee-hunters in this vicinity inform me that nearly all the colonies they find in trees have not passed a winter, and have not stores enough to carry them through one.

I find by observation that bees on the approach of cold weather cluster below their stores, but the first very cold day you will find them at the top of the frames at the end and next to the entrance, and as winter wears on, and their stores are consumed, they move towards the other end of the frame, taking the honey from the upper part of the frame the width of the cluster, and if the frames is narrow, they sometimes take all the honey from the upper part of the frame, and starve to death with plenty of honey below the cluster and on the adjoining frames.

I am fully convinced that a long frame like the Langstroth is better for wintering bees than a deep and narrow one. Give me a long frame with the entrance at the end of the frame, and no more frames in the hive than the bees will cluster on, with plenty of good stores and a good chaff hive for wintering on the summer stands.

Wellington, O. Maine.

The Darke County Union Bee-Keepers' Society will hold their next meeting in the Opera Hall at Union City, Ind., on Friday, July 29, 1887.

J. A. ROE, Sec.

Our New Book List on the second page is the place from which to select the book you want. We have a large stock of every book there named, and can fill all orders on the day they are received.

Local Convention Directory.

Time and place of Meeting.	
July 29.—Darke Co. Union, at Union City, Ind.	J. A. Roe, Sec., Union City, Ind.
Nov. 16-18.—North American, at Chicago, Ills.	W. Z. Hutchinson, Sec., Rogersville, Mich.
Dec. 7-9.—Michigan State, at East Saginaw, Mich.	H. D. Cutting, Sec., Clinton, Mich.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.


**SELECTIONS FROM
OUR LETTER BOX**

The Solar Wax-Extractor.—Jacob Wagner, Amana, Iowa, on July 19, 1887, writes:

I have found the solar wax-extractor, described by Mr. G. W. Demaree on page 343, to be of great advantage, as I have made one according to the description there given, and have thoroughly tried it. It is capable of melting any kind of combs in warm weather, and I have melted as much as 10 pounds in a warm day, and only once changed the location of the extractor. The extractor is so simple in construction that anybody able to handle a saw and hammer can make one in half-a-day.

Poor Season—Cure for Bee-Stings.—Dr. A. Eastman, Union, Ills., on July 19, 1887, says:

The honey crop is a failure here this year, on account of the drouth. I am afraid the bees will not get enough honey to winter on. The following is my remedy for bee-stings, which is ahead of anything that I have ever tried or heard of: Pull out the sting, then bathe with "ledum palustre," or "marsh trefoil," the strong tincture.

Too Dry for Bees.—Dr. A. S. Haskin, Lawrence, Mich., on July 18, 1887, writes:

I put away 55 colonies last fall, and this spring I had 17 of them left. Bees are doing very poorly here; we will not have over one-fourth of a crop this year, unless the fall is more favorable than the spring and summer have been so far. The trouble has been that it was too dry.

Only Quarter of a Crop.—M. L. Spencer, Little Genesee, N. Y., on July 18, 1887, writes:

The honey crop in this locality is a failure—not over one-fourth of a crop, if that. There was no white clover to speak of, and what there was seemed to produce no honey. The forepart of the season was cold and dry; the latter part, hot and dry. The bloom was burned up. Basswood lasted but a few days, and that bloom was fairly burned up. Next comes

buckwheat and fall flowers. I never saw honey come in so slowly, and consequently the bees are slow about capping sections, and are stained up some. There was a light shower this morning. I have heard from two other apiaries of 400 colonies, and they report no swarms in one and some honey, and the other has had some honey and swarms. One apiary of 175 colonies has had only 8 swarms, but I did not learn how much honey was taken; the other had some 220 colonies, and has had only 13 swarms, and 600 pounds of comb honey.

No Producers' Association Needed this Year.—Eugene Secor, Forest City, Iowa, on July 15, 1887, writes:

The prospect for honey is not very good. There is no white clover surplus. Basswood bloomed from June 24 to July 10; it was very abundant, and all we have so far is from that. At its opening there was scarcely a pound of honey in a hive. If the fall is favorable we may have goldenrod and thistle honey. The Mississippi Valley is suffering for want of water. In this vicinity crops are fair in spite of unfavorable conditions. The spring wheat and oats harvest is just beginning. The season is about two weeks ahead of time. Judging from my own knowledge, honey is not going to flood the markets next winter. I do not believe that we will need a "Producers' Association" to keep prices up.

Re-Naming Extracted Honey.—E. F. Smith, Smyrna, N. Y., on July 1887, writes:

In regard to the extracted honey controversy, I am sorry to note the unkind and unjust criticisms of Mr. G. W. Demaree, which have lately appeared in print. When Mr. Demaree suggested the name "liquid honey," for honey out of the comb, no doubt he did so without weighing the matter fully, and when the hydra-headed obstacle, "granulated" or "candied" (liquid) honey arose, it knocked his new name "higher than a kite." Mr. D. should have at once dropped his new name, and acknowledged the unfitness of it. May I suggest the names "combless honey," or "ex-comb honey"? Say I then bought or sold honey as follows: Ten pounds of comb honey at 15 cents, \$1.50; 10 pounds of combless honey at 10 cents, \$1.00—total, \$2.50.

Foul Brood Appearing.—I. P. Wilson, D.D.S., Burlington, Iowa, on July 14, 1887, writes:

A few days since, my friend J. W. Ward, of this city, called at my office and said: "I have foul brood in my apiary. You had better examine your colonies. I thought I had better give you warning at once, etc." He then called on Mr. Geo. Bischoff, and delivered to him the same message. Mr. Bischoff and I both examined our bees in the evening, and sure enough, the scourge had come, and if

I ever had any doubts about their being such a disease, I certainly am not in doubt now. The odor from this brood is foul indeed! The bees seem somewhat languid, and are not disposed to work. They appear to be discouraged, and yet they are in a healthy condition, so far as I am able to judge of their physical condition. The young bees are perfect in appearance, and all *uncapped* brood are apparently healthy. The foul brood and the healthy brood seem to be about evenly divided, and run in streaks and patches. I spent some time yesterday in examining this putrescent condition with my microscope, and I have no difficulty in finding myriads of bacteria. I have placed some of this foul brood in the hands of Mr. James Peterson, of this city, who is an experienced microscopist, and has given the "germ theory" of disease many years of careful study. I have requested him to give me in detail the result of his observations. I hope to be able to send something from his pen in a few days.

"Clear" Honey, etc.—F. D. Nagle, South Haven, Mich., on July 13, 1887, says:

As it is suggested to have a change of name for extracted honey, I propose the name "clear;" that is, honey free from comb. But I care not what name it may have, just so that it may sell better than it has in the past. The honey crop has been very light so far.

Convention at Chicago.—Arthur Todd, Philadelphia, Pa., on July 15, 1887, says:

If at all possible I want to go to the convention at Chicago, but any date earlier than Oct. 16 to Oct. 20 conflicts with the county and State Fairs that I want to go to with honey. The best Fair in all New Jersey is the last of all, and is generally Oct. 14, or thereabouts. Many others may want to attend Fairs, so Oct. 18 to Oct. 22 would seem to be the best date.

Fertilization of Queens.—T. F. Kinsel, Shiloh, O., asks the following:

- When queens mate, are the ovaries impregnated by copulation? If not, what is?
- A queen—to all scrutiny, perfect—lays "drone eggs" exclusively; what is the trouble?

[1. In mating, the spermatheca, a small sack appended to the ovipositor or egg-tube, is filled with the sperm. Leuckart, of Germany, estimated that this sack would contain, when freshly filled, 25,000,000 sperm-cells. We see, then, why the queen needs to mate but once. These active, thread-like sperm-cells are peculiar in that they retain their vitality or activity even for five years; and so long as active,

they are functionally perfect. I do not think that these sperm-cells affect the queen or her eggs, although some do. I believe that a queen, however mated, will produce pure drones of her own kind. If this is not true, the only way that the queen can be tainted in blood, through the presence of the sperm-cells, is by cell-inoculation; something like what takes place when a wound or sore enlarges. Some cells of the tissue are poisoned, and they inoculate others, and so the lesion spreads.

2. It is not very uncommon for queens to prove or become "drone layers." If young, they simply have failed to mate, and as there are no sperm-cells, no eggs can be fecundated. As was well shown by Von Siebold, unfecundated eggs of bees, ants, and wasps will develop, but will always produce drones or males. In case the queen is old, the spermatheca may become depleted, in which case of course the eggs will remain unfecundated.—A. J. COOK.]

White Clover Nearly a Failure.—B. W. Peck, Richmond Centre, O., on July 14, 1887, says:

The white honey harvest has closed here. White clover was nearly a failure; basswood did fairly well. I have taken about 40 pounds per colony—about one-half comb and the other half extracted honey. I commenced with 38 colonies, and increased them to 48. Those who let their bees swarm got but little honey. We need a rain for the fall crop.

Lucerne.—Wm. J. Tracy, Burrillville, R. I., writes:

I send a plant to be named. I think it is a species of clover, and until recently I supposed that it was sweet clover, but I find that it is different plant.

[The plant is *Medicago sativa*, the common Lucerne. It is not cultivated to a great extent in America, but it is often found thinly scattered over the greater portions of the United States.—T. J. BURRILL.]

Very Little Honey Taken, etc.—Paul Scheuring, Nicollet, Wis., on July 14, 1887, writes:

Last year I commenced the season with 108 colonies, increased them to nearly 200, and got 6,500 pounds of comb honey and 1,500 pounds of extracted. This season I commenced with 160 colonies, having increased them, by natural swarming, to 215 colonies, and have not had 25 pounds of honey; and for every pound I extract from unfinished sections I will have to feed at least the same amount

of sugar syrup for winter stores. As I do not believe in feeding extracted honey, I always save the nicest combs of honey for the bees for winter; but when I do not get any, and have to feed for winter, I prefer sugar syrup to any other feed. Where bees are wintered in the cellar, in putting them out in the spring it is necessary to put them on their same stands; that is, must each colony have the same place which it occupied the season before, or will it do to interchange them?

[No; they will mark their location anew after their cellar experience.—ED.]

Honey-Plants of Idaho.—F. H. McDonald, Star, Idaho, on July 4, 1887, writes:

One colony of my bees cast a swarm on May 2, and another on May 13. The latter part of May was cold and frosty, and the bees killed off their drones by the score. In June bees did well, and there was plenty of swarming. The following is what our bees have to work on: Willow, balm, poplar, fruit-bloom, blackberry, raspberry, white clover, red clover, and alfalfa, the last but not the least. The bees gather more honey from alfalfa than from any other bloom we have.

Time for the Convention.—E. H. Collins, Mattsville, Ind., on July 20, 1887, says:

If the Convention is held at the time of the Fat Stock Show I can go; and also many in this community go to the Fat Stock Show who do not go to a local entertainment.

"Slung" Honey.—M. S. West, Flint, Mich., writes:

Apropos of the discussion regarding a name for honey out of the comb, how do you like the name given by a customer who came to me to buy "slung" honey, as he called? Several in this vicinity call the extractor a "honey slinger," and its product "slung honey."

[No! No! That will never do. It is indefinite, inelegant, uncertain, unsuitable, and wholly inappropriate.—ED.]

Indorses all its Acts.—L. Eastwood, Waterville, O., on July 19, 1887, says:

I am in a fruit-growing neighborhood, and within corporate limits; the people are intelligent, and understand that the bees work for their interest, as well as for mine. Others may come of different minds, and make war on the bees—since it is becoming epidemic—"no telling where lightning may strike;" so I cheerfully renew my membership in the "Union," and indorse all its acts. The Manager's report shows that "in union there is strength."

No Surplus this Season.—Thos. O. Hines, Anamosa, Iowa, on July 15, 1887, says:

There is no prospect of getting any surplus honey here this season. White clover looked as nice as I ever saw it, but it did not seem to have any honey in it. We have had very little swarming in this neighborhood, and what we have had will starve, unless we have a good honey-flow this fall.

Nothing to Report.—M. W. Shepherd, Rochester, O., on July 18, 1887, says:

No white clover, no basswood; no honey, no swarms—no money. Who envies us our fortune?

Small Crop—Alsike Clover.—J. Few Brown, Winchester, Va., on July 18, 1887, writes:

The season in this locality for surplus honey gathering closed about July 8, with a very short crop gathered, not more than one-fifth of last season's crop. There was plenty of bloom, but very little honey. My 100 colonies will not average more than 15 to 20 pounds of surplus, with only 3 swarms. My 2 acres of Alsike clover, sowed last season with timothy, was filled with bees from daylight until dark, and made splendid hay. I have never seen mentioned why Alsike hay is free from dust. I think it is because the stalk or stem is free from fuzz, while the red clover is not.

Flowers Fertilized by Bees.—A. C. Tyrrel, Madison, Nebr., on July 18, 1887, writes:

To prove that bees *do* fertilize flowers (if proof is necessary after all that has been written upon the subject by eminent writers), I send two stalks of *Melissa* in bloom—one white, the other blue. The flowers, when the plants were first imported, were pure white, and remained so until I procured bees. It will be observed that a great transformation has taken place, not only in the flowers, but the stalk has been changed from green to blue. I wish to ask if honey gathered from the blue flowers will be darker in color than that from the white? If so, I will destroy all of the plants having blue flowers. The pollen is certainly much darker.

[It is a transformation, indeed. The white flowers of the original are blue in the improved, and the stalk also has become purple. No further proof of the agency of the bees in cross-fertilizing and improving the flowers is at all necessary, yet it is pleasant to witness it under our own supervision and management. You can easily test the matter about the color of the honey. We do not think that it will be darker in the plants with the blue flowers.—ED.]

Centrifugal Honey.—Mark Coffin, Milton, δ Ky., writes:

There appears to be considerable discussion about the name for "extracted honey," and I think the term extracted frequently creates a wrong impression. A groceryman in this place put labels with "extracted honey" printed on them, on some packages of honey, and a little girl went home and told her ma that Mr. N. had "extract of honey," and she was sent back to the store to get some, and the lady remarked that it was no better than strained honey. Now if no better name can be found, I would suggest that we call it "centrifugal honey," which would be expressive, and most people would understand that it was thrown out by centrifugal force. In some instances it might need an explanation, but not often. I think that Mr. Demaree might like that as well as "liquid."

A "Helping-Hand Society."—W. H. Shirley, Millgrove, ϑ Mich., on July 15, 1887, says:

My honey crop for this year will not exceed the \$1.25 fees for the National Bee-Keepers' Union, unless the latter part of the season is better than it has been so far. I cannot afford to miss the benefit that the Union has been, and will continue to be to our pursuit. I cannot understand why bee-keepers will neglect to join such a "helping-hand society."

Strained Honey, etc.—F. Wileox, Mauston, \odot Wis., on July 14, 1887, says:

I have not taken a pound of comb honey yet this season, and only one pound per colony of that other kind—let us call it "strained," because the old-fashioned strained honey has entirely disappeared in this country. The time fixed for the convention, Nov. 16 to 18, suits me very well.

Honey Enough for Winter Stores.—John Peters, Eldora, \odot Iowa, on July 19, 1887, writes:

The bees are provided for; they had 6 days run on basswood. The weakest have enough, and the majority have some surplus. My amiable and beloved wife has been taken from me by death. My apiary being in the middle of the farm, I fear no trouble from neighbors. I send my fees to the Union, however, so as to defend the pursuit.

Securing Increase—Half a Crop.—Harvey Feathers, Royalton, \odot Wis., on July 18, 1887, writes:

We have had some exceedingly hot weather here for the last week; on July 16 it was 10° Fahr., the warmest that it has been for many years. I see from reports of some bee-keepers, that their bees do not swarm as much as usual. We have had the most excessive swarming that we have ever had. I had 220 colonies, spring count,

and almost all of them have swarmed. On June 24 and 25 we had 49 prime swarms (for I allow no others to issue), which kept my wife and myself very busy hiving them. My manner of getting increase is as follows: Put about $\frac{1}{2}$ of the bees from each of 2 swarms into one hive, and return the remaining bees to their former homes; by so doing I have to sacrifice $\frac{1}{2}$ of my old queens, but I keep all of my colonies very strong in bees, and consequently get enough more honey to more than compensate for the loss of the queens. Bees in this locality did not store much surplus honey from the clover this season, but basswood yielded fairly well, with the exception of two days; it lasted from June 30 until July 11, which was ten days earlier than usual. We do not expect more than one-half of a good crop of honey this season. Last season I obtained 11,000 pounds of nice comb honey from 175 colonies, spring count.

"Honey" vs. Extracted, etc.—T. Pierson, Summit, \odot Va., says:

In reference to the matter on pages 421 and 435, about re-naming extracted honey, it seems to me that calling honey out of the comb simply "honey" is best, as you suggest on the latter page. But if a new name is wanted, how would "separated" honey do? Creamery men separate milk from cream by centrifugal force. Would it show a lack of originality or an act of petty stealing to use the word "separated"? Can you recommend the rubber stamp advertised by G. T. Hammond, Brockport, N. Y.

[Yes; we have one of the rubber stamps, and it works to perfection, and we want nothing better.—ED.]

Drouth and Buckwheat.—H. H. Brown, Light Street, \odot Pa., on July 20, 1887, writes:

I have had no surplus honey yet. White clover was plentiful, but there was no honey in it. There is but little basswood in this locality, and buckwheat honey will not be much, for the past five weeks have been too dry to plow so as to sow buckwheat, and the drouth is going to hurt late fall honey-plants, as they are dying. So prospects for buckwheat cakes and honey are rather poor. But we will hope that it is for the best.

Honey Crop very Light, etc.—Rev. S. Roese, Maiden Rock, \odot Wis., on July 15, 1887, writes:

In this (Pierce) and adjoining counties the honey crop is very light. We had some white clover. It has been too dry, and in some localities no rain has fallen since the snow went off. Basswood opened ten days earlier than usual, and yielded very little honey; the flow lasted only three days. We have had, of late, several good showers, but too late for basswood. Wild sunflowers and goldenrod are just appearing, and we hope

for some fall honey from the several kinds of fall flowers. I lost about all my bees last winter in an above-ground bee-house. I got some again in the spring (27 colonies in all), which cast only 14 swarms. Many hives are full of bees, and ought to swarm, but they seem to understand the season and matters in general better than their keepers; at any rate all of mine have stores enough for winter. I extracted in all only $1\frac{1}{2}$ barrels of basswood honey. I have all my bees in Simplicity hives and frames, with upper story, and all filled with combs saved from last year. The Northwestern Bee-Keepers' Convention I think will meet just at the right time to suit us all in this part of the country. Our bees are put into winter quarters about the 10th or middle of November, and at the appointed time, Nov. 16, 17 and 18, on which dates fare will be low, we will take the opportunity to see our many fellow-bee-keepers.

Honey and Beeswax Market.

The following are our very latest quotations for honey and beeswax:

CHICAGO.

HONEY.—We quote: Extracted, 5@7c., according to quality and package. New honey in 1-lb. sections brings 15@16c., and one nice lot sold for 17c. Comb honey crop of 1886 is exhausted.

BEESWAX.—22c. R. A. BURNETT.

July 20. 161 South Water St.

DETROIT.

HONEY.—Some new white comb sold at 12 $\frac{1}{2}$ cts., but prospects for better prices are good.

BEESWAX.—25c. July 20. M. H. HUNT, Bell Branch, Mich.

SAN FRANCISCO.

HONEY.—We quote: Extracted, white, 5@5 $\frac{1}{2}$ c.; light amber, 5@5 $\frac{1}{2}$ c.; dark, 4@4 $\frac{1}{2}$ c. Comb, 2-lbs., 10@14c.; 1-lbs., 10@15c. Market firmer and prices improving.

BEESWAX.—20@23c. Market firm. July 19. SCHACHT & LEMCKE, 122-124 Davis St.

ST. LOUIS.

HONEY.—Choice comb, 9@10c. Strained, in barrels, 3@4c. Extra fancy, 4 more than for going prices. Extracted, 4@4 $\frac{1}{2}$ c. Market dull.

BEESWAX.—Steady at 21c. for prime. July 11. D. G. TUTT & CO., Commercial St.

SAN FRANCISCO.

HONEY.—We quote: White comb, 12@14c.; amber, 7@10c. Extracted, white, 4@4 $\frac{1}{2}$ c.; light amber, 3@4 $\frac{1}{2}$ c. Market quiet.

BEESWAX.—19@21c. May 14. O. B. SMITH & CO., 423 Front St.

MILWAUKEE.

HONEY.—Choice new 1-lbs., 14@15c.; old 1-lbs., 14@12 $\frac{1}{2}$ c.; 2-lbs. not in demand, 10@11c. White extracted in kegs and barrels, 7@7 $\frac{1}{2}$ c.; in small tin cans, 7@8c.; dark in kegs and barrels, 6@6 $\frac{1}{2}$ c.; in small tin cans, 6@7c. Market ready for new crop.

BEESWAX.—25c. July 21. A. V. BISHOP, 142 W. Water St.

KANSAS CITY.

HONEY.—We quote: White clover 1-lbs., 10@12c.; dark, 9 to 10c. White clover 2-lbs., 10 to 11c.; dark, 9 to 10c. Extracted, 5 to 6c. in small way.

BEESWAX.—17@20c. July 14. CLEMONS, CLOON & CO., cor 4th & Walnut

CINCINNATI.

HONEY.—We quote for extracted, 8@7c. per lb. Best comb brings 11@14c. Demand improving.

BEESWAX.—Good demand, 20@22c. per lb. for good to choice yellow. Jun. 11. C. F. MUTH & SON, Freeman & Central Av.

BOSTON.

HONEY.—1-lb. packages of white clover honey. Best comb brings 11@14c. Demand improving. Sales very light. Fancy white extracted in good demand but supply limited.

BEESWAX.—26 cts. per lb. July 11. BLAKE & RIPLEY, 57 Chatham Street.



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THOMAS G. NEWMAN & SON,
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923 & 925 WEST MADISON ST., CHICAGO ILL.
 At One Dollar a Year.

ALFRED H. NEWMAN,
 BUSINESS MANAGER.

Special Notices.

To Correspondents. — It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

As there is Another firm in Chicago by the name of "Newman & Son," we wish our correspondents would write "American Bee Journal" on the envelope when writing to this office. Several letters of ours have already gone to the other firm (a commission house), causing vexatious delay and trouble.

We will Present Webster's Dictionary (pocket edition), and send it by mail, postpaid, for two subscribers with \$2. It is always useful to have a dictionary at hand to decide as to the spelling of words, and to determine their meaning.

Money Orders can now be obtained at the Post Offices at reduced rates. Five dollars and under costs now only 5 cents. As these are absolutely safe, it will pay to get them instead of the Postal Notes which are payable to any one who presents them, and are in no way safe.

Red Labels for one-pound pails of honey, size 3x4½ inches. — We have now gotten up a lot of these Labels, and can supply them at the following prices: 100 for \$1.00; 250 for \$1.50; 500 for \$2.00; 1,000 for \$3.00; all with name and address of apiarist printed on them—by mail, postpaid.

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System and Success.

EW All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. The prices are reduced, as follows:

For 50 colonies (120 pages)	\$1.00
" 100 colonies (220 pages)	1 25
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The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

Sweet Clover, (*Medicago sativa*), furnishes the most reliable crop of honey from July until frost, and at the same time it furnishes the most delicious honey, light in color, and thick in body. It may be sown in waste places, fence corners, or on the roadside. Sow two years running, on the same land, and the honey crop will be without interruption. Money invested in Sweet Clover Seed will prove a good investment. The Seed may be obtained at this office at the following prices: \$6.00 per bushel (60 lbs.); \$1.75 per peck, or 20 cents per pound.

Enamelled Cloth for covering frames, price per yard, 45 inches wide, 20 cents; if a whole piece of 12 yards is taken, \$2.25; 10 pieces, \$20.00; if ordered by mail, send 15 cents per yard extra for postage.

Should any Subscriber receive this paper any longer than it is desired, or is willing to pay for it, please send us a postal card asking to have it stopped. Be sure to write your name and address plainly. **LOOK AT YOUR WRAPPER LABEL.**

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Back Numbers of the **BEE JOURNAL** for this year are getting scarce. If any of our new subscribers want them, they should order them soon, or we may not be able to supply them. Last fall we had to refuse many applications for them, as they were all gone in September. Say so at once, if you want them.

Colored Posters for putting up over honey exhibits at Fairs are quite attractive, as well as useful. We have prepared some for the **BEE JOURNAL**, and will send two or more free of cost to any one who will use them, and try to get up a club.

Queens. — We can mail a Tested Italian Queen (bred for the best results as well as for beauty) for \$2.00; Untested Queens, \$1 each, or \$9.00 per dozen. Orders solicited.

Don't do it! — Notwithstanding our many cautions, some persons still persists in sending silver in letters. In nine cases out of ten it will break the envelope and be either lost or stolen. Cases come to light nearly every day, showing that silver sent in letters stops somewhere on the way. It is an invitation to the thief—a regular temptation! If you wish to *safely* send money, get a Post-Office Money Order, Express Order, or Bank Draft on Chicago or New York. When money is sent in either of the above-named ways, it is at our risk. In any other manner, it is at the risk of the sender.

Sample Copies of the **BEE JOURNAL** will be sent **FREE** upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office, or we will send them all to the agent.

We pay 20 cents per pound, delivered here, for good Yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

We have a large quantity of CHOICE WHITE EXTRACTED HONEY, in kegs holding from 200 lbs. to 225 lbs. each, which we will deliver on board the cars at 8 cents per lb. Orders solicited.

Yucca Brushes are employed for removing bees from the combs. They are a soft, vegetable fiber, and do not irritate the bees. We can supply them at 5 cents each, or 50 cents a dozen; if sent by mail, add 1 cent each for postage.

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 28A1t

ITALIAN Queens by return mail, Tested 90c.; Untested, 50c., or \$5.50 per dozen.
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WANTED, for 30 days—Orders for Italian Queens at 60c; 2 or more at 50c each. Satisfaction guaranteed.—**W. G. FISH, Ithaca, N. Y.**
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400 POUNDS of Comb Honey in 1-lb. sections and in 12 and 24 lb. Crates. For sale cheap, if bought at once.
LOUIS WERNER,
 EDWARDSVILLE, ILLS.
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WANTED,
ALL the Bee-Men who see this advertisement to send us hundred pounds of 1-lb. and 2-lb. sections of White Comb Honey, as sample, by Express, stating quantity and price for same. Cash, delivered in Kansas City. **CLEMONS, CLOON & CO.,** Cor. 4th & Walnut, Sta., KANSAS CITY, MO.
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THIS new size of our Tapering Honey Pails is of uniform design with the other sizes, having the top edge turned over, and has a ball or handle, making it very convenient to carry. It is well-made and, when filled with honey, makes a novel and attractive small package, that can be sold for 20 cents or less. Many consumers will buy it in order to give the children a handsome toy pail. PRICE, 75 cents per dozen, or \$3.00 per 100.

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WE CAN now furnish VAN DEUSENS' Extra-Thin Flat-Bottom Foundation put up in 25-lb. Boxes, in sheets 16½ x 28 inches, at \$12.50 per box. 12 ft. to the lb.

The above is a special offer, and is a Bargain to all who can use that quantity.

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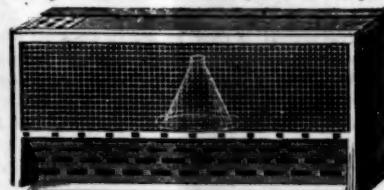
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Prices are as follows:

To hold 1 pound of honey, per dozen,	\$1.60
2 pounds " "	2.00
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TESTED Italian Queens..... \$1.00
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UNTIL further notice, I will send by return mail, safe arrival guaranteed, Good QUEENS from my best strains noted for gentleness and honey-gathering qualities, viz:

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